FROM

The Surgical

TO

The Mechanical

ART.



J. & E. FERRIS,
48, GREAT RUSSELL ST.,
LONDON, W.C.

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J. & E. FERRIS,

48, GREAT RUSSELL STREET,

LONDON, W.C.

(Corner of Museum Street, facing the British Museum)

Manufacturers of

Artificial Legs, Arms,

AND

ANATOMICAL MECHANICAL APPLIANCES,

IMPROVED CRUTCHES, ETC.

Hours—10 to 4.

Saturdays, 10 to 1.

[1871]

SOLE PROPRIETORS OF

PATENTS

FOR WHICH THE FOLLOWING MEDALS AND CERTIFICATES HAVE BEEN AWARDED—

U.S.A. CENTENNIAL EXHIBITION.
GOLD MEDAL, 1876.

LONDON AMERICAN EXHIBITION.
HIGHEST AWARD, 1887.

BRUSSELS EXHIBITION. GOLD MEDAL, 1888.

HAVRE EXHIBITION. GOLD MEDAL, 1887.

AMERICAN INSTITUTE OF NEW YORK.
SILVER MEDAL, AND MEDAL OF SUPERIORITY,
1875, 1876, 1877, 1878, 1879, 1880, 1881, 1882,
1883, 1884, 1885, 1886.

HIGHEST AWARD AND SILVER MEDAL
PARIS EXHIBITION, 1889.

PREFACE.



IT is of the utmost importance that Ladies and Gentlemen who have had the misfortune to lose a leg or an arm, and who desire to be supplied with an artificial substitute, should adopt such as are constructed on principles the most closely allied to nature, those, in fact, which are second only to nature itself; not merely for the sake of appearance but for the health and comfort of the wearer. Probably nothing can be more irritating or worse for the nervous system than the wearing of an ill-fitting and badly constructed artificial leg, which makes its very real presence obtrusively prominent, and precludes walking with anything approaching the natural gait, or even sitting with any degree of comfort.

Fortunately it has fallen to our lot to perfect and introduce artificial limbs which are in appearance and anatomical mechanism, an exact counterpart of nature, with the result that patients who have adopted them are loud in their praises, and express surprise that such simple mechanical arrangements have never been previously introduced.

One of the most important features in our artificial legs is our *Ankle-joint with lateral movement*, and here the natural ankle has been carefully studied and imitated, with the result that by means of certain mechanical combinations, we have succeeded in producing motions exactly the same as the Tibia and Fibula with the Astragalus in the natural leg. The utility of the lateral motion is apparent to observers of the wearers of artificial legs, and infinitely more so to the wearers themselves, as in its absence it is next to impossible to walk on an uneven or inclined surface, whereas with our lateral action, a person can walk on the roughest roads, without the least jar, discomfort, or danger.

Another very important improvement where amputation has taken place below the knee, is our *adjustable knee-joint with conical bearings* the object being to give about three times the bearing surface beyond those of ordinary construction, and to allow of any wear being taken up by the cone, thus preventing the joints wearing loose and becoming noisy, an occurrence so frequent in ordinary artificial legs.

Many makers of artificial limbs say they *do not* exhibit their manufactures, the reason doubtless being that the articles they now produce are the same in every respect as have been used by an all enduring public for the past hundred years. WE DO EXHIBIT our limbs whenever and wherever we can, with the result that they have invariably taken the highest award for lightness, durability, superiority of construction, and close imitation of nature. We make limbs for the poor as well as the rich, the principle of construction being in either case identical.

If our readers have any doubt as to the efficacy of, or the comfort to be obtained from the artificial limbs supplied by us, we beg them most respectfully to read the copies of, or extracts from a few testimonials we have very recently received, printed at the end of this pamphlet. The originals can, if desired, be seen on application at the office.

In conclusion we earnestly invite Medical men before advising their patients as to what particular maker they should apply to for an artificial limb, to be good enough to call and inspect those of our manufacture. Working and other models will be produced, such as we are confident will not fail to give satisfaction.

Forms for measurement are furnished on application, but we advise patients to come to us to be measured, fitted, and a cast taken of the stump, so as to avoid mistakes which cause both annoyance and trouble.

PATENT ADJUSTABLE KNEE-JOINT WITH CONICAL BEARINGS.

FIG. 1.

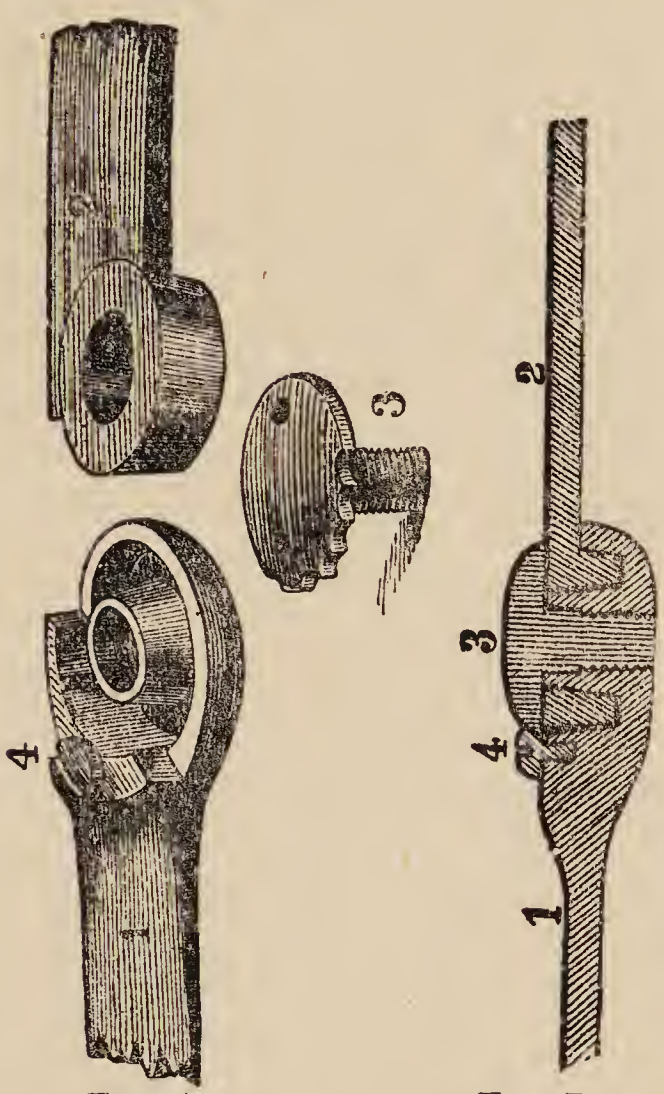


FIG. A. FIG. B.

These cuts represent our patent knee-joints, having about three times the amount of bearing surface beyond those of ordinary construction. No. 1 is attached to the leg. No. 2 is held by the leather socket above the knee. No. 3 is a strong screw, for holding Nos. 1 and 2 together and forms the means of adjustment in case of wear. No. 4 is the set screw for preventing the large screw, No. 3 becoming loose.

Fig. B is a sectional view of a medium sized joint. Patients who have worn legs with joints which become loose and noisy, will realize at once the great advantage of this perfect and adjustable joint.

DESCRIPTION OF PATENTED ANKLE-JOINTS WITH AND WITHOUT LATERAL MOTION.

FIG. 2.

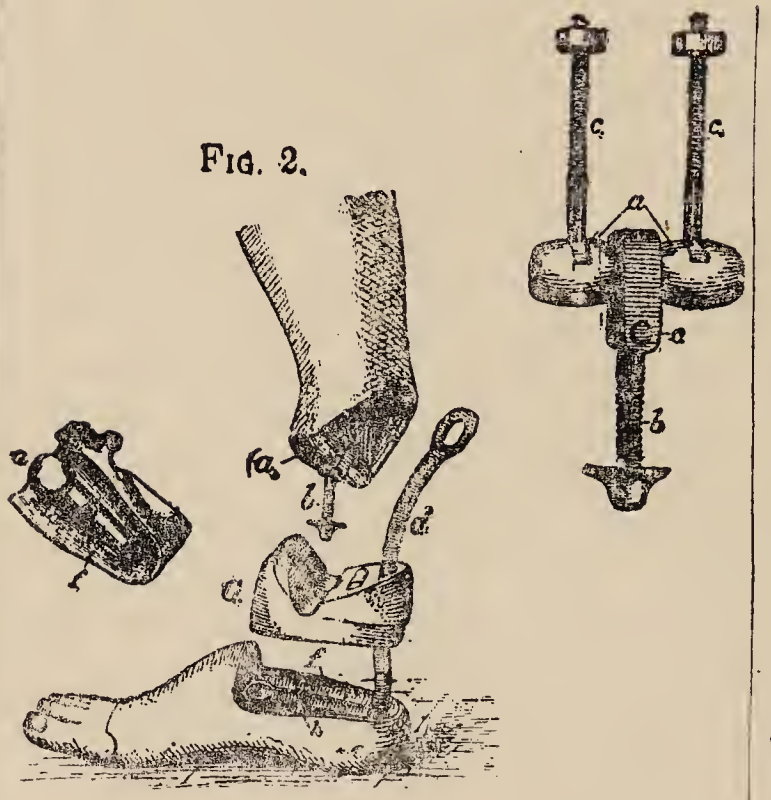


FIG. 2 shows construction of universal ankle-joint.

A. Ankle-joint articulates in block G.

B. Bolt securing foot to leg.

The extra block, G, is for shewing the lateral articular bearings F, F.

FIG. 3.

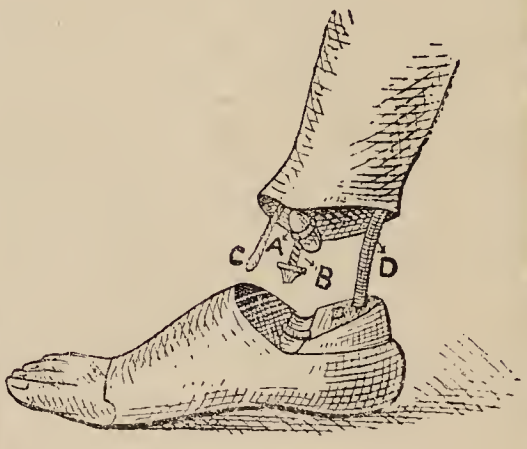


FIG. 3 shows construction of single ankle-joint.

A. Ankle-joint articulates on foot.

B. Bolt securing foot to leg.

The cord D is attached the same in both styles.

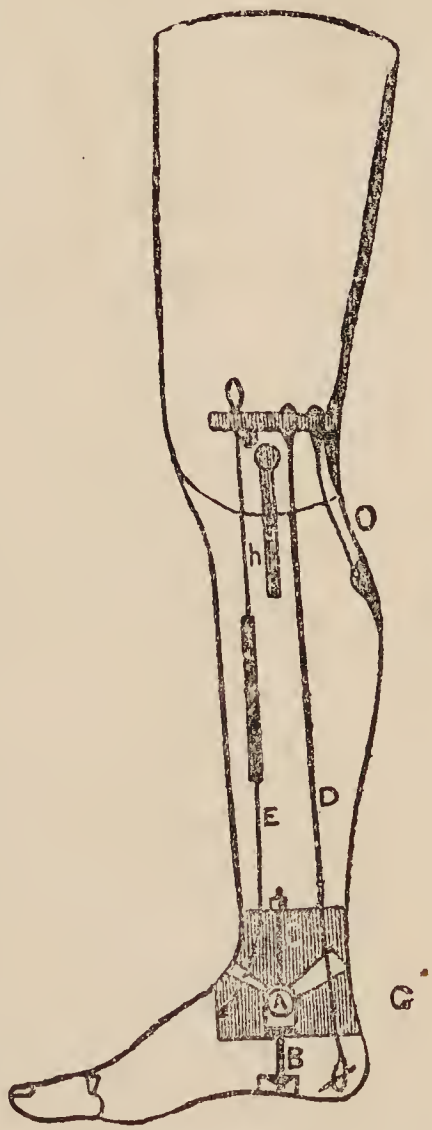
What we particularly wish to point out in the above cuts, are the following claims to originality:—Claim 1: The semi-circle bearing F under block G, with ball shaped end, and bushing for same in foot. Claim 2: These bearings force them to wear directly to the centre, which makes the adjustment perfect, and prevents any displacement whatever from wear. Claims 3 and 4 refer to the jointed bolt B, with pivot C and heel tendon D.

DESCRIPTION OF FULL LENGTH LEG.

FIG. 4.

The articular surfaces of the joints are steel bolts working in smooth leather sockets. The knee joint consists of steel brace joints H rivetted firmly to each side of the lower leg; the upper ends being hollow, articulate in sockets at each side of the knee, and are easily adjusted in case of wear. The hollow bolt A forms the ankle joint attached to the leg by two steel bolts C, making a thoroughly reliable joint. It articulates the block G, admitting of motions the same as the Tibia and Fibula with the Astragalus in the natural leg. The block G forms the upper part of the foot and produces the side or lateral motion, rolling in the same manner and effect as the astragalus; its articular surface underneath is at the centre of the block and foot, and is semi-circular in form.

FIG. 4.



SECTIONAL VIEW OF FULL LENGTH LEG.

The joints have greater bearing surfaces; are stronger and more reliable than those of any other construction. They are absolutely life-like, moving with the greatest ease and elasticity. The heel cord D (a substitute for the tendon Achilles) controls the forward motion, and retains the elevation of the body on the ball of the foot when walking. The spring E is connected at the knee and block G and acts as foot and knee spring.

FULL LENGTH LEG (Fig. 5) WITH LATERAL ANKLE MOTION, USING THE CUP AND BALL ANKLE-JOINT.

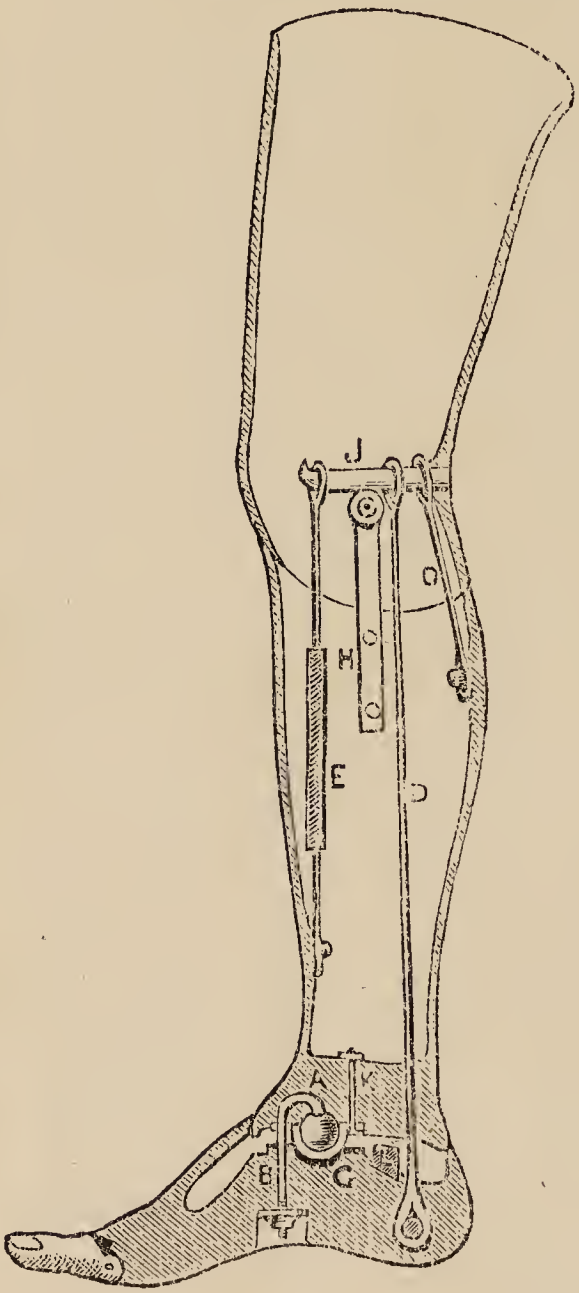


FIG. 5.

The advantages of this leg over others of ordinary construction, are as follows:

Great simplicity, life-like movement, and ease of adjustment in case of wear.

Fig. 5 is a section of the leg when put together. The knee-joint is the same as that previously described, the great difference being in the ankle-joint, the construction of which is clearly shown below in fig. 6. The cup-plate A, which is securely fastened to the leg by means of the screw K, works in the leather covered joint G, in the centre of the foot, and is kept firmly held against the cup-plate A by means of the ball-screw B, the ball C working in A. The side motion of the ankle is regulated by means of strong springs fitted on either side of the ball-joint F F, and by the use of a rubber buffer L, the forward motion, (controlled by the heel cord D) is the same as described in fig. 4.

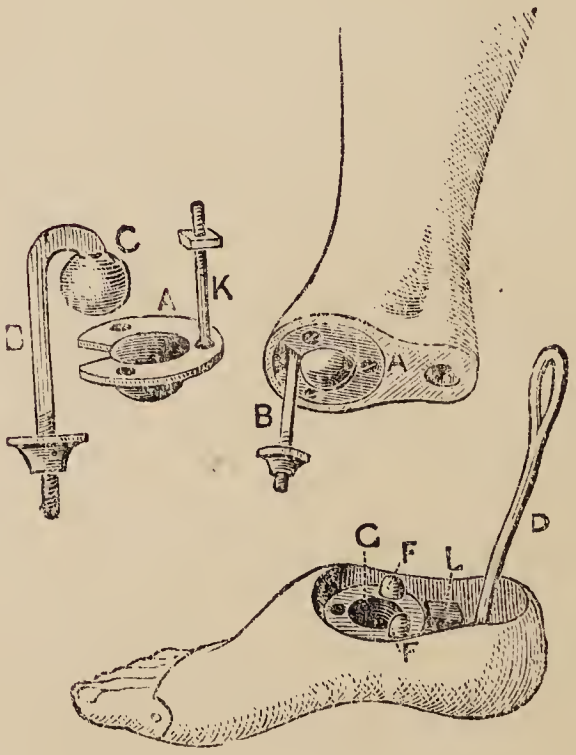


FIG. 6.

LEG FOR THIGH AMPUTATION. FIG. 7.

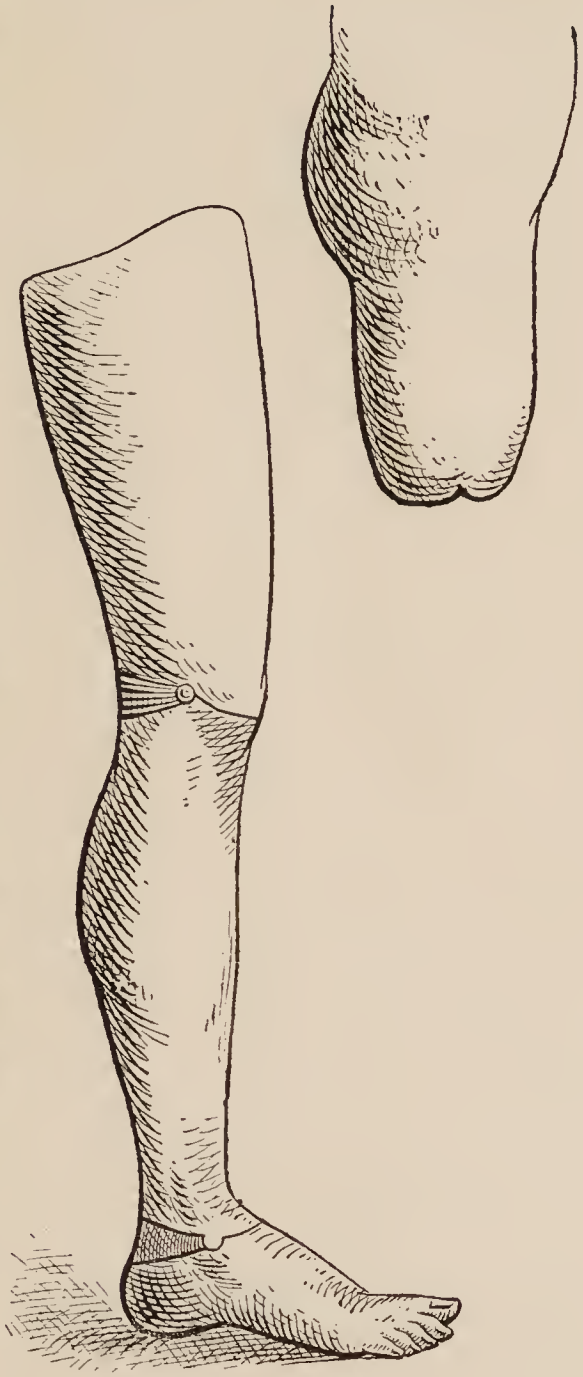
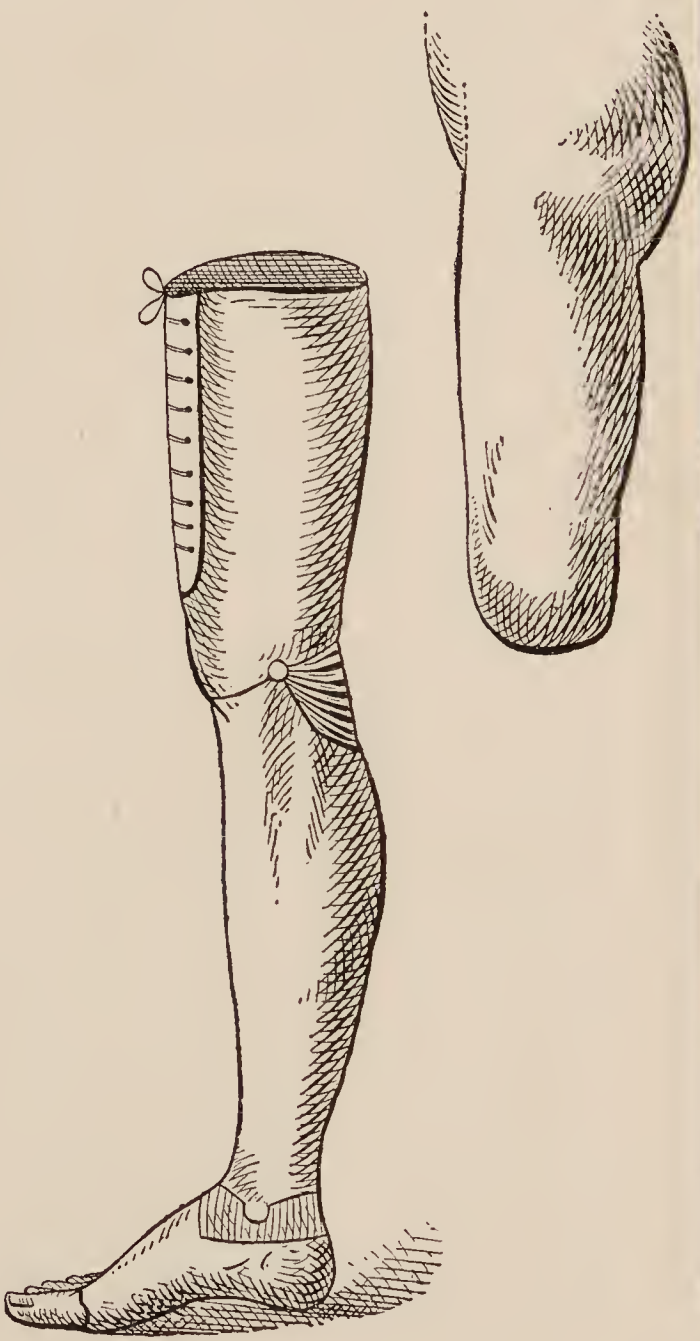


Fig. 7 represents a full length leg, such as is required for a thigh amputation at any point between the hip and knee-joints The top or socket of the leg is perfectly fitted to the shape of the stump. The leg is held firmly in its position either by means of straps passing over the shoulders, or by means of a belt, which has a running cord attached to the top of the socket. The latter we strongly recommend.

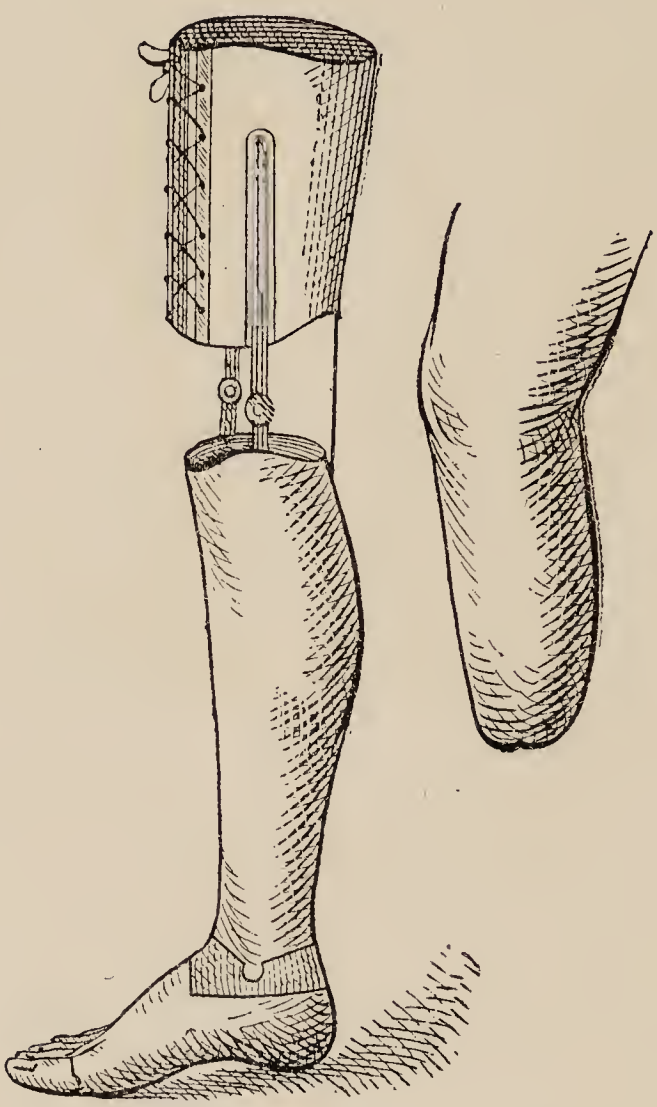
Fig. 8 is the leg we make when the amputation is at the knee-joint, or at the upper third of the lower leg, leaving the stump so short that it cannot be used. The entire bearing in the later case is taken on the knee. The socket of this leg does not extend up to the body, being made open in front and secured by means of lacing. In most cases a strap over the shoulders is necessary.

FIG. 8.



LEG FOR AMPUTATION AT KNEE-JOINT.

FIG. 9.



LEG FOR AMPUTATION BELOW THE KNEE.

Fig. 9 shews an artificial leg which we supply in cases where amputation has taken place at any point between the knee and ankle-joint. It is not necessary in all cases to attach side or knee-joints. Where the stump is in a good healthy condition, and from 8 to 10 inches long, it is sufficient in many cases to take all the weight of the patient, and with the elastic heel-cord and universal ankle-joint it can be used with great comfort and safety. Where however, the patient has a laborious amount of walking or standing, it is far preferable to have the thigh support, which affords great relief to the stump.

Fig. 10 represents an artificial leg applied to a stump, where the amputation has been performed after what is known as the Syme's amputation, and is similar to what is known as Pirogoff's amputation. In either of these cases the bearing is almost entirely taken on the end of the stump; should however the end be at all sensitive, the greater part of the bearing can be taken at the sides and upper part of the socket, the same as if amputated above the ankle-joint.

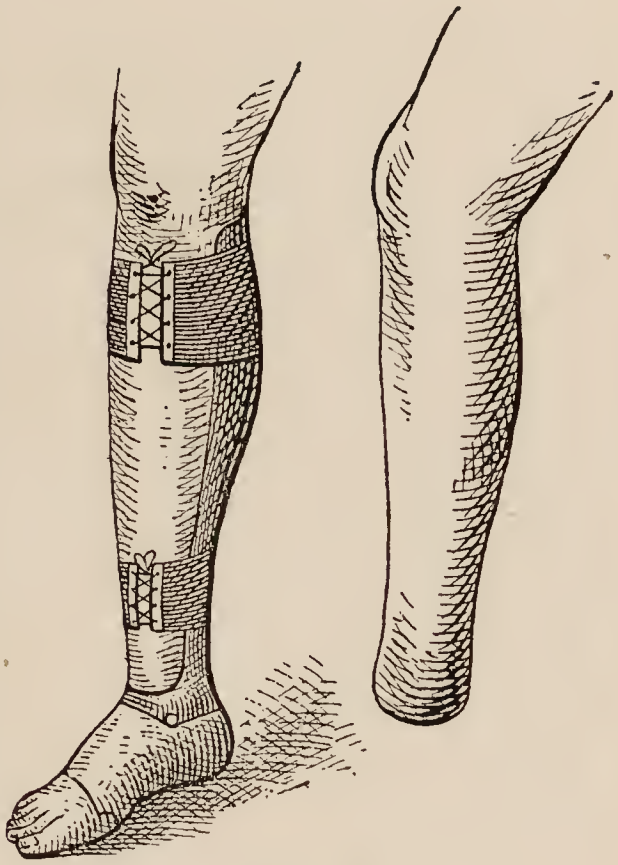


FIG. 10.

In Fig. 11 we have an artificial foot applied to a stump known as Chopart's amputation. This is a most unsatisfactory stump, both for the patient and artificial limb maker. In many cases an artificial foot can be applied very successfully without side braces and attachments about the ankle. It depends entirely on the condition of the stump and the power the patient has over the ankle joint.

A person can walk moderately well wearing an ordinary shoe with a very strong steel insole, extending the full length of the foot, to retain the proper shape of the shoe.

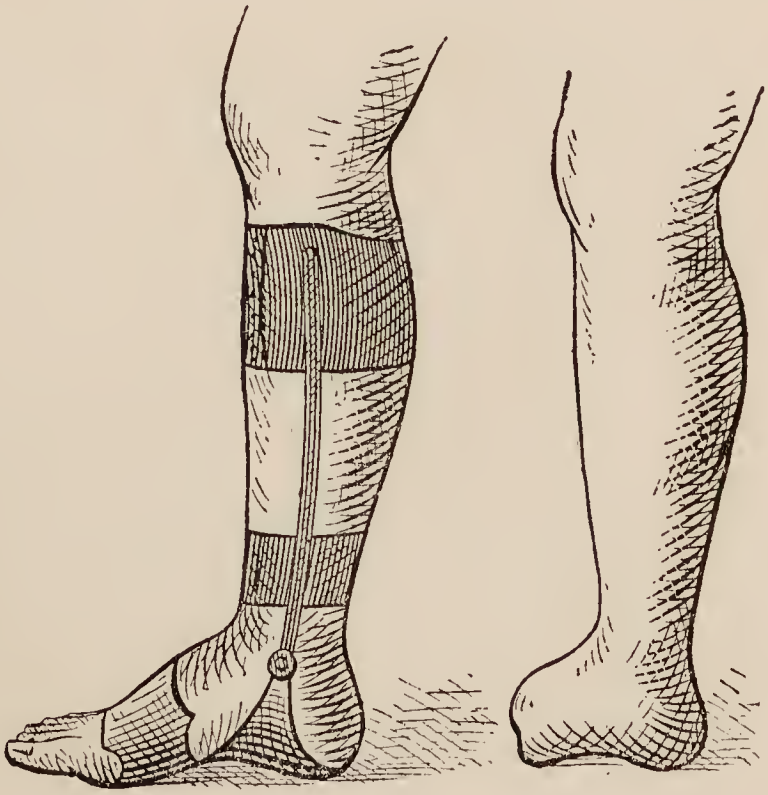


FIG. 11.—FOOT APPLIED TO CHOPART'S AMPUTATION.

EXTENSIONS AND APPLIANCES FOR SHORTENED AND DEFORMED LIMBS.

In treating cases of shortened or deformed limbs, our appliances vary according to the length and condition of the limb. No two cases are alike; it, therefore, requires special attention to obtain the correct elevation and most natural bearings. An artificial appliance must be attached to such part of the limb as is able to control it, and the same applies to any apparatus adopted in cases of deformity.

Fig. 12 is an extension suitable for a leg which is shortened from 2 to 5 inches, but retaining sufficient strength to walk without additional support to the leg; the same as walking on a cork sole boot, or iron stirrup, such as many wear. The boot worn on this foot is a little larger at the instep, in other respects it is the usual shape and size, and when covered by the garment has a most natural appearance.

In this case the natural ankle has its freedom. A, represents the artificial foot extension proper: B, toe joint, allowing the foot to flex on the ball same as in the natural foot: C, is an adjustable strap over the instep. The boot extending above the ankle being laced or buttoned, secures it firmly to the foot of the shortened limb; the dotted line indicated in fig. 13 shews how nicely the deformity is concealed.

FIG. 12.

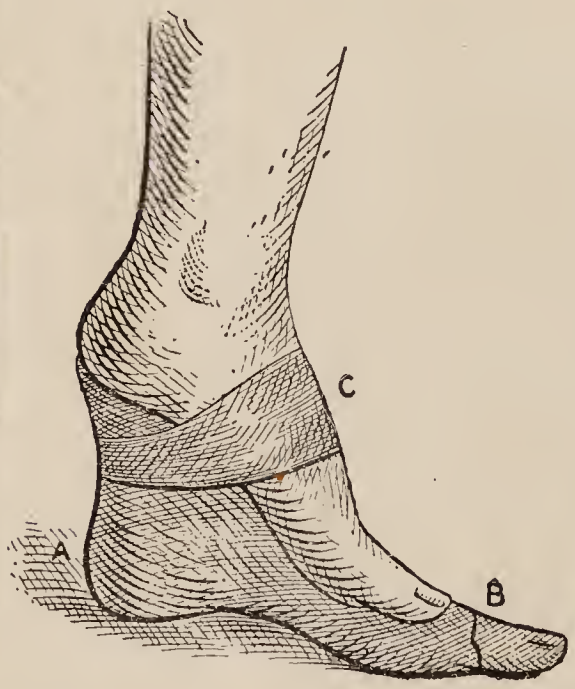


FIG. 13,



ARTIFICIAL ARMS.

The artificial arms of our manufacture are so simple in construction that it will not be necessary to give a very detailed description of them. The elbow, wrist and finger-joints are moveable, and can be used to great perfection in handling light articles. The frames of these arms are a mere shell, made of carefully selected willow, hollowed to fit the stumps. The artificial is formed in shape and size to mate the natural arm. It is then covered with calf-skin, which adds great strength, and, after being enamelled a flesh color, weighs scarcely 1½ lbs. for a full length arm.

We do not wish the reader to anticipate that these arms can be used to great advantage in all kinds of work, for the hand and fingers can only be used in very light operations; but for persons who follow heavy work, farming, etc., they are made so that the hand can be detached, and a hook, ring, or any instrument suitable to the wearer's business attached; the hand being kept neat and clean for dress purposes.

FIG. 14

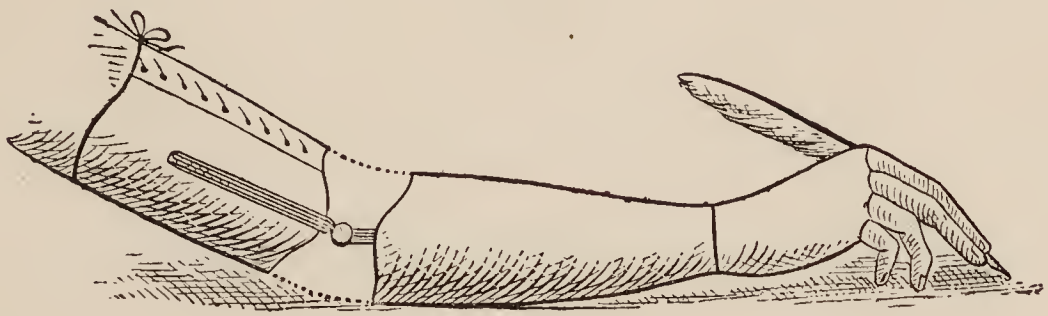
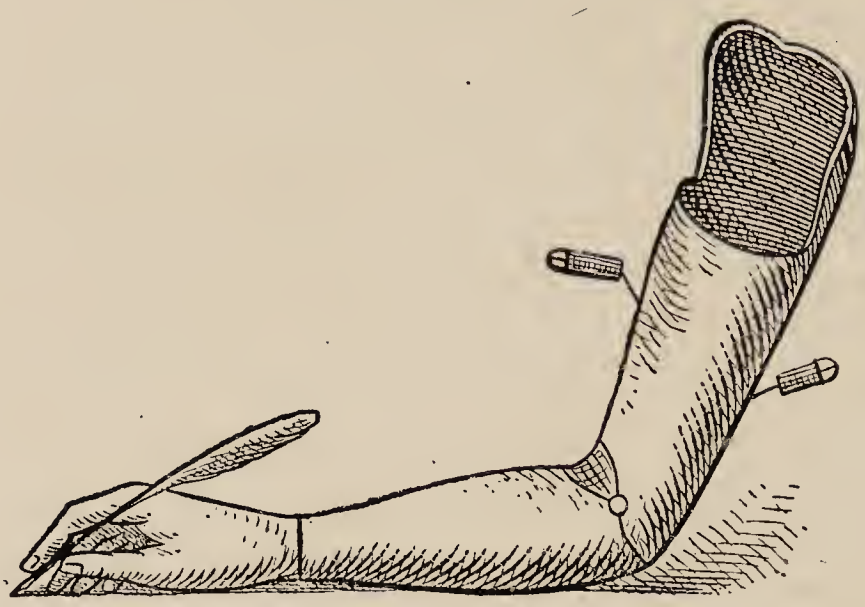


Fig. 14 represents an arm for amputation between the wrist and elbow joints. It is attached by lacing above the elbow; and a single strap with loop under the opposite arm and over the shoulder, to which is attached the hand opening cord.

Fig. 15 represents an arm for amputation between the shoulder and elbow joints. It is attached to the body by light web straps, which cross the back, pass under the opposite shoulder, and back to the buckles on the artificial arm. The buckle at the back is for elevating or flexing and extending the lower arm; the operation being a slight forward movement of the stump, by means of which the elbow-joint is controlled in a very graceful manner; the arm can be raised at any angle to suit the user.

FIG. 15



The buckle in front is for opening the finger and thumb, which are held in a natural position by means of a spring placed in the hand, the thumb resting on the index finger, the operation being simply by pressing downward on the artificial arm or stump, so as to draw on the cord, when the fingers are drawn open, and the instant the wearer takes hold of an article, by relieving the pressure, the fingers grasp and hold it until they are drawn open again. The only machinery throughout the whole arm is simply two cords and the spring (referred to), making it the most simply constructed and effectual of any artificial arm made.

The elbow joint in a full length arm, is arranged in such a way that it can be secured at right angles, so that a basket may be placed on it, or a weight of 30 or 40 lbs. carried with ease, the weight being supported from the top of the shoulder.

To a steel socket, which is placed in the hand, can be attached a knife, or fork when eating; or a brush for hair dressing, etc. These articles, if desired, are furnished with the arms, and their services can only be fully appreciated by those who use them.

Artificial arms are divided into two classes, the difference being principally in the finger movements. In the second class the fingers are all stationary, the opening power being attached only to the thumb; but it can be used in the same manner, and to nearly the same advantage as in the first-class arm, but it is not so perfect an imitation of nature.

COPIES OF AND EXTRACTS FROM TESTIMONIALS LATELY RECEIVED.

Gloucester, April 3rd., 1889.

DEAR SIRS,

I have now been using one of your artificial legs for the last eighteen months, and can fully testify to the comfort and ease with which I can walk with it. *The lateral motion* I find of the greatest benefit, as I can walk on uneven surfaces with nearly the same confidence as before my accident. I also find great advantage in the knee-joint having such a large bearing surface, and the way in which I can take up pressure on the knee greatly facilitates walking. *I use my tricycle* now very often and find it a great boon, as I can get about nearly as well as ever on it.

I have tried another leg, by a leading London maker, but much prefer yours, and can confidently recommend it to any one who, like myself, may have the misfortune to require one, and give it as my opinion such limbs are a benefaction to all unfortunate cripples.

Believe me, yours faithfully,
(*Signed*) WILLIAM STOUT,
(*Ex-Amateur Champion Sculler.*)

September 10th, 1889.

In the year 1884 I had the misfortune to lose my leg. The operation was performed by Sir Joseph Lister, bart., and was most successful.

Since then I have had two artificial legs, made by one who is considered the best leg maker in London, but I have had very little comfort in wearing his legs. A few months ago I

was persuaded to have a leg made by you, and I am only too thankful to be able to state that I wear the same with great comfort to myself. I walk much better, feel much more secure with it in use, and am, in every respect, much pleased with it, and can thoroughly recommend any one requiring an artificial limb to procure one similar to my own.

I enclose my card and remain,

Yours sincerely,

London, W.C., 16th September, 1889.

DEAR SIRS,

It is just a year since I saw one of your artificial legs, and at once noticed the superiority of the same above any I had previously seen.

I, as you know, at once gave you an order, and it is with great pleasure that I am writing to express to you my entire satisfaction, for after giving the limb a fair, if not a severe trial, I found it a splendid substitute for my own, and it by far exceeds my expectations. I may add that I am on my feet most of the day, walking, on an average, six miles every evening after leaving business, and *I never feel the fatigue I used to on my previous artificial limbs*, in fact I am often surprised at my own accomplishments. With regard to wounds on the stump, caused by the friction of the limb made by other makers, your leg is such a perfect fit that I have not had a single wound to inconvenience me since the day I first wore it.

In conclusion I should like to say that if at any time you have any clients who would like to test the truth of my statements, and see what really can be done on one of your artificial legs, I shall be very pleased to give them an interview.

Truly yours.

G.T.S.

August 1*st*, 1889.

DEAR SIRS,

Two months after I had my foot taken off, my doctor got me one of your artificial legs, and in a few days I could walk about again. I now have two of them, and they give me every satisfaction; they are very comfortable, and I can walk a considerable distance. *The movement is second best to nature.*

Yours gratefully,
D.L.E.

September 24th.

The new leg you made for me has arrived, and I enclose cheque for the balance, I am a little awkward with it yet, but now feel assured it only requires practice to make me walk more comfortably and gracefully than I ever expected to do in this world.

Yours sincerely,

26th August, 1889.

M.D. has worn a full length artificial leg, (after your patent), for about a year, and can bear testimony to its superiority.

August, 1889.

DEAR SIRS,

I cannot express to you how pleased I am with the artificial arm you made for me. It seems everything that can be desired as a substitute for the original.

Yours very truly,
R.M.

Burton-on-Trent,

MY DEAR SIRS, *28th November*, 1889.

I am receipt of your letter, and shall be most happy to see your Patient or the Doctor. Last Sunday I walked six miles in "*perfect comfort and enjoyment*," and anyone not knowing me, would not be aware that there was anything the matter beyond a slight swagger in my walk. *There is no limp*, and I walk much better than when I saw you last; and I think with you, that you have not made a more successful case than mine, for which you have my best thanks.

Yours faithfully,

W. H. L.

Melton Mowbray,

GENTLEMEN, *11th October*, 1889.

With reference to the Arm you made for me, I am glad to say it has given me every satisfaction. In fact, it has surpassed my own expectations, both in its quality and strength. It has really made a new man of me. The first time I had it on I took a lead pencil and wrote my name in a good legible hand—a surprise to those that saw it, in fact, many disbelieved it till they saw me write, and all they could exclaim was, "what will they get things to next?" I have now a violin, and have made good progress, holding the bow with my artificial hand. I rode a bicycle for years before I lost my arm, but a friend of mine bought a Safety Bicycle, and I asked him to let me try it, at which he laughed, and said I should not be able to guide it, however, I got on and rode it, and am open to ride forty miles any day.

Having worn your arm for two years, I can with confidence recommend them as the very best I have ever seen or heard of.

Yours respectfully,

WILLIAM LEADER.

Leeds,

GENTLEMEN, *January 13th*, 1890.

I send up the leg as the attachments in front require strengthening. It works excellently. Please do not fail to let me have it back by Friday as I am very helpless without.

Yours truly,

A. L. J.

94, *Piccadilly, London, W.,*

GENTLEMEN, *March 5th*, 1891.

I have much pleasure in testifying to the comfort I have received from wearing the Artificial Leg and Belt made by your firm. I have worn one of yours now for the last two years, and it has given me every satisfaction.

Yours faithfully,

G. E. K. B.

October 9th, 1890.

DEAR SIRS,

With reference to the pair of artificial feet which you made for me in August last, I write to express my entire satisfaction with them. They are such a great improvement on those I used to wear, that directly I got them, I felt I had at last succeeded in getting something I could walk with in comfort. The feet are light, well-made and have quite a natural appearance. The action in walking is perfect, second only to nature. I quite agree with you that no one would for a moment suppose I had lost both my feet. I can stand alone without any fear of falling, and can walk without the aid of even a stick. My

friends are all astonished at my walking so well and delighted at the improvement. As to wounds forming through friction caused by the sockets not fitting properly, I find they fit so perfectly that it is impossible for any friction to take place. In conclusion, I shall be most happy to give any information to intending purchasers of your artificial limbs, and if they are not satisfied with the article you make them they must be very hard to please. Thanking you for the courtesy and kind attention you have given my case. I enclose my card, and remain,

Yours faithfully,

J. H. C.

Oldham,

GENTLEMEN, *January*, 1891.

The artificial arm arrived safely, and we are much pleased with the clever work about it.

H. J.

OPINIONS OF THE PRESS.

Meeting of the British Medical Association held at Birmingham, July, 1890.

Extract from theReport of the BRITISH MEDICAL JOURNAL. August 23rd, 1890.

The exhibit of Messrs. J. and E. Ferris (48, Great Russell Street, W.C.) included a full-length Artificial Leg with Patent Universal Ankle Movement, Automatic Knee Action, and Spring Toe-Joint. This leg is well constructed, and is as far superior to those of ordinary make as a natural leg is to an artificial one. A full-length Artificial Arm with Automatic Acti ons at the Elbow, Finger, and Thumb Joints was also exhibited by this firm. This limb is most beautifully modelled, and the simplicity of its mechanism, together with its lightness, constitute it a good specimen of what an artificial arm should be. They also exhibited a Belt for wearing with an artificial leg, so constructed that the attachments to the leg are connected by means of a running cord, which acts automatically ; and when the wearer sits down, the cord, by shortening in front and lengthening behind, removes all strain and discomfort. *Also an Artificial Foot for Syme's operation. This is the most modern improvement in artificial limbs, being a foot with an artificial ankle with sub-astragalus movement.*

THE HOSPITAL GAZETTE, Sept. 13th, 1890.

By no means the least attractive exhibit in this section was that of Messrs. J. & E. Ferris, artificial limb makers, of 48, Great Russell Street, W.C., which included a full-length artificial leg with patent universal ankle movement, automatic knee action, and spring toe-joint: an artificial arm with automatic actions at elbow, finger, and thumb-joints ; a belt for wearing with an artificial leg, so constructed that the attachments to the leg are connected by means of a running cord, which acts automatically, to that when the wearer sits down, the cord, by shortening in front and lengthening behind, removes all strain and discomfort; and artificial fee and hands of very clever design and beautiful finish.

Extract from THE HOSPITAL.

A short time since, we paid a visit to Messrs. J. & E. FERRIS' rooms in Gt. Russell Street, in order to examine the artificial limbs made by them. We were greatly pleased with what we saw. The Firm by combining a number of ingenious inventions, has succeeded in making some of the most useful limbs we have inspected. The arms and legs are equally ingenious, well made, and beautifully modelled. We were much struck with ths lightness of the limbs, and also their appearance. Whilst we were examining the various limbs, a gentleman came into the room, and until Mr. Ferris drew our attention to him, we did not notice any peculiarity in his walk. However, he turned out to be a client who had lost a leg just below the knee. We asked him to pnt his heels together, and then stoop to pick a handkerchief off the floor. This he did with great ease. We need hardly say that the test is a severe one. He told us that he had walked as much as twelve miles in a day, could ride a horse or tricycle, and that he was enabled to follow his profession, that of an architect, as well as ever he had done before he lost his limb. Messrs. FERRIS have taken three gold and thirteen silver medals, and two highest awards. This is sufficient evidence of the quality of their inventions.

REPORT OF THE ROYAL MILITARY EXHIBITION, 1890.

Extract from COURT CIRCULAR, May 24th, 1890.

We can confidently assert that these artificial limbs are the perfection of mechanical skill applied to an accurate knowledge of anatomy, and they are as different and superior to those of ordinary makers as it is possible to conceive. That they will attract the attention of the military authorities goes without saying, for they only require to be known to be universally adopted.

Extract from THE RAILWAY SUPPLIES JOURNAL, June 7th, 1890.

The artificial limbs manufactured by Messrs. J. and E. FERRIS are marvels of ingenuity with great simplicity of construction. The sockets are made of carefully selected willow hollowed to fit the stumps. After being shaped, they are covered with skin and enamelled flesh colour. We have heard of a gentleman who applied to Messrs. FERRIS for an arm, and the first time he had it on, he wrote them a testimonial in a clear, legible hand. Gold and silver medals and the highest awards have invariably been taken by the patentees for the lightness, durability, superiority of construction, and the close imitation of nature of the artificial limbs manufactured by them. The disabled or deformed may indeed thank Messrs. FERRIS for bringing to bear upon their requirements, sympathetic consideration, perfect anatomical knowledge and mechanical genius.

FAMILY DOCTOR.

Extract from an article on Artificial Limbs, August 16th, 1890.

We are greatly indebted to Messrs. FERRIS of 48, Gt Russell Street, W.C, for the use of the wood blocks illustrating this article, and we strongly advise any of our readers who are so unfortunate as to require artificial substitutes for lost limbs, to go to this firm, if only to see to what perfection they have brought the manufacture of artificial limbs.

TO THE EDITOR OF THE FAMILY DOCTOR.

SIR.—With reference to the illustrated article on artificial limbs which appeared in your issue of the 16th August last, I write to state that after reading that article I called on Messrs. J. and E. FERRIS, of 48, Great Russell Street, Bloomsbury, W.C., where I was shown a working model, and being struck with its beauty and simplicity of arrangement, I gave them an order for a pair of "Symes" artificial feet, I having had the misfortune to lose both my own feet. I have now worn them for five months continuously, and can safely say that they in every way bear out the advantages claimed for them. They are perfectly lifelike in appearance, strongly made, and have quite a natural action in walking. In fact, judging by my own case, which I think is as good a one as could possibly be found, it is next to impossible for anyone to detect that my feet are artificial. I can walk a good distance without feeling tired, and can walk about without even a stick, although I generally carry one when taking my walks abroad. Being lighter than many other kinds of artificial feet, and fitting so perfectly, they are very comfortable to wear, and there is no fear of wounds forming through friction (which is so frequently the case with many of the artificial limbs made), as Messrs. FERRIS are very careful in making the limb to fit the stump.

My friends and acquaintances continually express their surprise at my walking so well, and I have had on several occasions to show the feet to them before they would believe what I told them.

I went to Messrs. FERRIS on crutches and came away with only a stick, and bearing in mind that it was the first time of wearing the feet, I think that, in itself, proves their superiority.

I have written the above solely for the benefit of any of your readers who have had the misfortune to lose any of their limbs, and to prove the truth of what you said about the artificial limbs in the article above mentioned.

Apologising for encroaching on your valuable space,

I remain, Yours faithfully,

Feb. 9, 1891. AN EMANCIPATED SUFFERER.

48, GREAT RUSSELL STREET,

BLOOMSBURY,

LONDON, W.C.

Dear Sir,

We take the liberty of sending you one of our Illustrated Pamphlets on the construction of Artificial Limbs manufactured by us.

There are many thousands of persons in this Country wearing substitutes for lost limbs who are totally unaware of the perfection to which these appliances have been brought, and of the ease, comfort, and naturalness in walking that can be obtained by the use of Artificial Legs such as we alone make.

We state without hesitation or fear of contradiction that we are the only makers of Artificial Legs with <u>sub-astragalus motion</u>, enabling a person who has lost one or both Legs to walk quite naturally of Arms having hands with which the wearer

NOTE _ A LIBERAL COMMISSION WILL BE ALLOWED YOU ON ORDERS RESULTING FROM YOUR INTRODUCTIONS.

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can write and in fact do almost anything (see Testimonials on page 16) also of extension feet for shortened Legs, which completely do away with the hideous and clumsy high soled boot usually worn in such cases.

It may prove an exceeding kindness on your part, and we shall take it as a very great favor, if you will be so good as to hand, or forward the Pamphlet to any person you may know who has lost a Limb, and we shall be very pleased to send you other copies on application.

Apologising for troubling you,

We are, Dear Sir,

Yours faithfully,

J. & E. Ferris